

## **NOTE**

**This document contains the Connecticut regulations for the abatement of air pollution with the recently adopted revisions to the regulations that became effective April 4, 2006. This document was prepared by the State of Connecticut Department of Environmental Protection and is provided for the convenience of the reader. This is not the official version of the regulations. The official regulations are published by the State of Connecticut, Judicial Branch, Commission on Official Legal Publications in the Connecticut Law Journal. Official legal publications may be obtained from the Commission on Official Legal Publications, 111 Phoenix Ave Enfield, CT 06082 (telephone: (860) 741-3027, or [www.jud.state.ct.us/colp/ColpDefault.htm](http://www.jud.state.ct.us/colp/ColpDefault.htm)). In the event there is an inconsistency between this document and the regulations as published in the Connecticut Law Journal, the Connecticut Law Journal will serve as the official version.**

**Section 22a-174-29. "Hazardous Air Pollutants"**

**(a) "Hazard Limiting Values" and "Ambient Air Quality Standards"**

- (a) (1) "Hazard Limiting Values" (HLV)'s for "Hazardous Air Pollutants" for 8-hour and 30-minute averaging times are listed in Tables 29-1, 29-2, and 29-3. "Ambient Air Quality Standards" (AAQS) are listed in section 22a-174-24.
- (a) (2) For a "hazardous air pollutant" or other "air pollutant" for which either a "HLV" or an "AAQS" has not yet been established by the "Commissioner," the "Commissioner" may request the Commissioner of Health Services to propose changes to Tables 29-1, 29-2 or 29-3 or to section 22a-174-24, to provide supporting documentation for his selection, and to submit it for review by the "Hazardous Air Pollutant Advisory Panel" within ninety (90) days of receipt of the request of the "Commissioner."
- (a) (3) The "Commissioner" shall request the "Panel" to review the proposal and supporting documentation and to make a recommendation to the "Commissioner" to approve, modify or decline to accept the proposal within ninety (90) days of receipt. Within sixty (60) days of receipt of the recommendation of the "Panel," the "Commissioner" shall announce a hearing for a new "HLV" to be included in Tables 29-1, 29-2, or 29-3 or "AAQS" for section 22a-174-24.

**(b) Maximum Allowable Stack Concentrations.**

(1) On or after October 1, 1986, no person shall cause or permit the emission of any hazardous air pollutant listed in Table 29-1 from any stationary source at a concentration at the discharge point in excess of the maximum allowable stack concentration, unless the stationary source is operating in accordance with the terms of an order or permit of the commissioner specifically allowing the continued operation of the stationary source in violation of this subdivision while coming into compliance or the source is in compliance with the provisions of subsection (d) (3) of this section.

(2) No person, who is required to obtain a permit under section 22a-174-3a of the Regulations of Connecticut State Agencies or, who, between July 1, 1986 and March 15, 2002, should have applied for and obtained a permit under former section 22a-174-3 of the Regulations of Connecticut State Agencies, shall cause or permit the emission of any hazardous air pollutant from any stationary source or modification at a concentration at the discharge point

in excess of the maximum allowable stack concentration unless such source is in compliance with the provisions of subsection (d) (3) of this section. The commissioner shall not apply the provisions of this subdivision to the owner or operator of any stationary source who applied for a permit to construct under former section 22a-174-3 of the Regulations of Connecticut State Agencies prior to March 1, 1986 and who received a notice of a complete application prior to July 1, 1986 or to any other owner or operator who received a permit to construct prior to July 1, 1986. Notwithstanding the foregoing, all resources recovery facilities and all incinerators shall meet the standards of this subdivision for all hazardous air pollutants.

(3) If the owner or operator of a stationary source that emits or may emit a hazardous air pollutant is in compliance with the MASC at the discharge point of that source, but the commissioner determines, through ambient monitoring, that the HLV is exceeded, then the commissioner may require that the concentration of the hazardous air pollutant at the discharge point be further reduced.

(4) The owner or operator of any stationary source or modification not subject to the provisions of subdivision (2) of this subsection that emits or may emit a hazardous air pollutant shall comply with the requirements of subdivision (2) of this subsection if the commissioner determines, through ambient monitoring, that the HLV is exceeded as a result of the emissions from that stationary source.

(5) For the purposes of subdivisions (3) and (4) of this subsection, any person who performs ambient air monitoring shall use methods and procedures approved by the commissioner.

**(c) Determination of "Maximum Allowable Stack Concentrations"**

(c) (1) The "maximum allowable stack concentration" of a "hazardous air pollutant" (in micrograms per cubic meter or parts per million) at the "discharge point" of a "stationary source" shall be determined as follows:

(A) If the "discharge point" is twenty (20) meters or less measured vertically from the ground elevation at the "discharge point," the "MASC" shall be:

$$\frac{0.885 \text{ HLV} (X + 1.08V_0^{.64})^{1.56}}{V_0}$$

[1]

Where "HLV" is the applicable "hazard limiting value" (in either micrograms per cubic meter or parts per million for 8-hour and 30-minute averaging times), "V<sub>0</sub>" is the average actual flow rate (in actual cubic meters per second) from the "discharge point," and "X" is ten (10) meters, or the distance from the "discharge point" to the closest property line, whichever is greater.

- (B) If the "discharge point" is more than twenty (20) meters measured vertically from the ground elevation at the "discharge point," the "maximum allowable stack concentration" ("MASC") shall be:

$$\frac{0.885 HLV (x_{\max} + 1.08V_0^{0.64})^{1.56} \exp[10.33(H - 20)^2(x_{\max} + 1.08V_0^{0.64})^{-1.56}]}{V_0}$$

[2]

Where "HLV" is the applicable "hazard limiting value" (in micrograms per cubic meter or parts per million) for 8-hour and 30-minute averaging times, "V<sub>0</sub>" is the average actual flow rate (in actual cubic meters per second) from the "discharge point," "H" is the height (in meters) of the "discharge point", measured vertically from the ground elevation at the "discharge point" and "X<sub>max</sub>" is the greater of the following distances:

- (i) ten (10) meters
- (ii) the closest distance, in meters, from the "discharge point" to the property line, or
- (iii) the distance, in meters, determined by:

$$4.47(H - 20)^{1.28}$$

[3]

Where "H" is the height (in meters) of the "discharge point" measured vertically from the ground elevation at the discharge point.

- (c) (2) For the purposes of this subsection, in determining the distance from the "discharge point" to the property line the "Commissioner" may allow consideration for any "watercourse" adjacent to the property in question. The

"Commissioner" may allow the use of the opposite shore in determining the closest distance to the property line.

**(d) Ambient Air Quality Standards.**

(1) The provisions of this subsection apply to any stationary source that emits an air pollutant for which there is an ambient air quality standard ("AAQS") found in section 22a-174-24 of the Regulations of Connecticut State Agencies except for any criteria air pollutant other than lead.

(2) If the source complies with the MASC and there is an applicable AAQS, then the owner or operator shall not cause or exacerbate a violation of the applicable AAQS unless the impact of the source is less than significant as listed in Table 3a(i)-1 set forth in section 22a-174-3a(i) of the Regulations of Connecticut State Agencies.

(3) If the source does not comply with the MASC and there is an applicable AAQS, then the owner or operator shall:

- (A) Install and use Best Available Control Technology for the applicable hazardous air pollutant; and
- (B) Not cause an impact in excess of the applicable AAQS if such impact is significant as listed in Table 3a(i)-1 set forth in section 22a-174-3a(i) of the Regulations of Connecticut State Agencies.

(4) Upon the request of the commissioner, the owner or operator of any stationary source shall make and submit to the commissioner, for his approval, a BACT determination for each hazardous air pollutant for which an AAQS has been set, as required by the commissioner, including costs estimates of all control options as may be specified by the commissioner.

(5) For the purposes of this subsection, the commissioner shall allow the use of only air quality models, data bases or other requirements approved by the commissioner prior to the determination of compliance with the AAQS.

**(e) Sampling for Hazardous Air Pollutants.**

(1) Testing to determine concentrations of hazardous air pollutants in the ambient air contiguous to a source may be required if the commissioner determines that the operation of a source might reasonably be expected to cause an exceedance of an applicable HLV or AAQS.

(2) In addition to any testing required by section 22a-174-5(e)(2) of the Regulations of Connecticut State Agencies, testing to determine concentrations of hazardous air pollutants at discharge points of sources may be required by the commissioner

if:

- (A) An exceedance of a HLV with an 8-hour averaging time is observed;
- (B) Two (2) or more exceedances of a HLV with a 30-minute averaging time are observed within two (2) non-overlapping 8-hour periods within any seven (7)-day period;
- (C) The source is required to meet the requirements of subdivision (b) (2) of this section;
- (D) The emissions from a source are suspected of causing a violation of an AAQS;
- (E) There is an enforcement action for violation of section 22a-174-20 or 22a-174-23 of the Regulations of Connecticut State Agencies; or
- (F) The source is suspected of emitting a hazardous air pollutant listed in Table 29-1.

(3) Testing to determine concentrations of hazardous air pollutants at either discharge points of stationary sources or in the ambient air shall be conducted by the commissioner, the commissioner's authorized representative or by persons qualified by training or experience in the field of sampling emissions from air pollution sources or in the ambient air. All sampling, emissions testing and laboratory analyses shall be done using procedures and techniques approved by the commissioner prior to the commencement of such testing.

(4) In addition to the provisions of subdivision (1) of this subsection, the commissioner shall perform testing for dioxin emissions in the ambient air in accordance with the requirements of this subdivision. The commissioner shall perform the following tests in the area of any resources recovery facility. The tests shall be representative of conditions existing prior to the commencement of operation and representative of conditions existing after the issuance of the permit to operate.

- (A) For tests representative of conditions existing prior to the commencement of operation for each subject resources recovery facility the commissioner shall analyze at a minimum a total of eight (8) samples. At a minimum, such tests shall consist of the collection of samples at four locations deemed representative by the commissioner during four distinct time periods and the analysis of two samples for each time period for a total of eight samples. The commissioner shall make every effort to perform such testing once per calendar quarter prior to the commencement of operation.

(B) For tests representative of conditions existing after the issuance of a permit under section 22a-174-3a of the Regulations of Connecticut State Agencies for each subject resources recovery facility the commissioner shall analyze at a minimum a total of eight (8) samples. At a minimum, such tests shall consist of the collection of samples at four locations deemed representative by the commissioner during four distinct time periods and the analysis of two representative samples per calendar quarter for the first year following issuance of a permit under section 22a-174-3a of the Regulations of Connecticut State Agencies. Based upon an analysis of the ambient data, results of stack tests, data from the continuous emission monitors and other pertinent information, the commissioner shall determine a representative ambient sampling program for subsequent years. The commissioner shall provide notice of this determination to the chief elected official of each town participating in the subject resources recovery facility.

**(f) Reporting Requirements**

- (f) (1) The owner or "operator" of any "stationary source" shall, upon written notice by the "Commissioner," supply him with information, for those time periods specified, concerning the usage of any substances listed in Table 29-1, 29-2, or 29-3 or the emissions of such substances into the ambient air.
- (f) (2) Information required in subdivision (f) (1) shall be provided on forms issued for this purpose by the "Commissioner."
- (f) (3) If the "Commissioner" deems that emissions of a "hazardous air pollutant" from a "stationary source" are likely to result in a severe and imminent health hazard, information required in subdivision (f) (1) shall be submitted by the owner or "operator" of the "stationary source" as soon as possible but not later than forty-eight (48) hours after receiving written notice from the "Commissioner." Nothing in this subdivision shall prevent the "Commissioner" from taking action in accordance with the provisions of Sec. 22a-181 C.G.S.
- (f) (4) Except as provided in subdivision (f) (3), such information required in subdivision (f) (2) shall be provided by the owner or "operator" of the "stationary source" within ninety (90) days of written notice by the "Commissioner."

**(g) Permits to operate a "stationary source" ordered to comply with any of the provisions of this section.**

(g) (1) The "Commissioner" may require the owner or "operator" of a "stationary source" to obtain a permit to operate if he is found by the "Commissioner" not to comply with any of the provisions of subsection (b).

**(h) Objectionable odors and compliance with other regulations**

(h) (1) Compliance with this section by a "stationary source" does not in any manner relieve the owner or "operator" of the responsibility to comply with the provisions of section 22a-174-23 or any other section of these regulations.

**(i) Adjustments to the MASC for Time Periods Less Then 8 Hours.**

Notwithstanding the provisions of subsection (c), the Commissioner may allow an adjustment to the MASC for sources which emit continuously for a period of more then thirty (30) minutes but less then eight (8) hours by multiplying the MASC determined under subsection (c) by the following factor:

$$\text{Adjustment Factor} = 5 - 4 \left( \frac{T - .5}{7.5} \right)$$

Where T = Number of hours the source is in continuous operation.

TABLE 29-1

“HAZARDOUS AIR POLLUTANT”	“CAS NUMBER”	“HAZARD LIMITING VALUE” (“HLV”)		VOLUMETRIC UNITS*	
		8-HOUR	30-MINUTE	8-HOUR	30-MINUTE
2-Acetylaminofluorene.....	53-96-3	---	---	---	---
Acrylonitrile.....	107-13-1	22	110	0.01	0.05
Aflatoxins.....	83219-44-7	---	---	---	---
.....	83219-45-8	---	---	---	---
4-Aminodiphenyl.....	92-67-1	---	---	---	---
Arsenic & compounds (as As).....	7440-38-2	0.05	0.25	---	---
Arsenic pentoxide.....	1303-28-2	---	---	---	---
Arsine.....	7784-42-1	1	5	0.25 ppbv	1.25 ppbv
Asbestos** .....	1332-21-4	---	---	---	---
Auramine.....	2465-27-2	---	---	---	---
Azathioprine.....	446-86-6	---	---	---	---
Benz(a)pyrene***.....	50-32-8	---	---	---	---
Benzene.....	71-43-2	150	750	0.05	0.25
Benzidine.....	92-87-5	---	---	---	---
Beryllium.....	7440-41-7	0.01	0.05	---	---
Beryllium oxide.....	1304-56-9	---	---	---	---
Beryllium sulfate.....	13510-49-1	---	---	---	---
Chlorambucil.....	305-03-3	---	---	---	---
Chlordane.....	57-74-9	2.5	12.5	---	---
Chlorinated camphene.....	8001-35-2	2.5	12.5	---	---
Chlornaphthazine.....	494-03-1	---	---	---	---
Chlorobenzilate.....	510-15-4	---	---	---	---
Chloroform.....	67-66-3	250	1,250	0.05	0.25
bis-Chloromethyl ether.....	542-88-1	0.015	0.075	5 pptv	25 pptv
Chloromethyl methyl ether.....	107-30-2	---	---	---	---

\* Volumetric units are in parts per million by volume, unless shown as parts per billion by volume (ppbv) or parts per trillion by volume (pptv).

\*\* The “HLV” for asbestos (all forms, including amosite, chrysotile, crocidolite, tremolite and fibrous talc) is 500 fibers, of a length of 5 micrometers or more, per cubic meter (8-hour average) and 2,500 fibers, of a length of 5 micrometers or more, per cubic meter (30-min average).

\*\*\* See Polycyclic Aromatic Hydrocarbons

Note: Dashed lines indicate that no “hazard limiting value” has been established for the “hazardous air pollutant” listed. The “HLV” and/or “AAQS” will be determined at a later date.

TABLE 29-1, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	<u>"HAZARD LIMITING VALUE" ("HLV")</u> (ug/m <sup>3</sup> )		<u>VOLUMETRIC UNITS</u>	
		<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Chromic acid and chromates (as Cr).....	---	0.25	1.25	---	---
Chromite ore processing (chromate), as Cr.....	---	0.25	1.25	---	---
Chromium, metal.....	7440-47-3	2.5	12.5	---	---
Coal tar pitch volatiles.....	8007-45-2	1	5	---	---
Coke oven emissions.....	---	---	---	---	---
Cyclophosphamide.....	50-18-0	---	---	---	---
Dibromochloropropane.....	96-12-8	0.05	0.25	---	---
3,3'-Dichlorobenzidine.....	91-94-1	---	---	---	---
1,2-Dichloroethane.....	107-06-2	20	100	5.ppbv	25.ppbv
Diethylstilboestriol.....	39011-86-4	---	---	---	---
Diethyl sulfate .....	64-67-5	---	---	---	---
4-Dimethylaminoazobenzene.....	60-11-7	---	---	---	---
Dimethyl sulfate.....	77-78-1	2.5	12.5	0.5 ppbv	2.5 ppbv
Dioxane, technical grade.....	123-91-1	450	2,250	0.125	0.625
Estrogens.....	---	---	---	---	---
Ethylene dichloride.....	107-06-2	20	100	5.ppbv	25.ppbv
Heptachlor.....	76-44-8	2.5	12.5	---	---
Hexachloroethane.....	67-72-1	50	250	5.ppbv	25.ppbv
Kepone.....	143-50-0	---	---	---	---
Melphalan.....	148-82-3	---	---	---	---
4,4'-Methylene bis (2-chloraniline).....	101-14-4	0.015	0.075	---	---
MOCA.....	101-14-4	0.015	0.075	---	---
Morpholine.....	110-91-8	350	1.750	0.1	0.5
Mustard gas.....	505-60-2	---	---	---	---
Myleran.....	55-98-1	---	---	---	---
beta-Naphthylamine.....	91-59-8	---	---	---	---
Nickel carbonyl, as Ni.....	13463-39-3	1.75	8.75	0.25ppbv	1.25 ppbv
Nickel (metal).....	7440-02-0	5	25	---	---
Nickel, soluble compounds (as Ni)*.....	---	0.075	0.375	---	---

\* Carcinogens

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date

TABLE D-1, *continued*

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	<u>"HAZARD LIMITING VALUE" ("HLV")</u> ( <u>ug/m<sup>3</sup></u> )		<u>VOLUMETRIC UNITS</u>	
		<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Nickel sulfide.....	12035-72-2	---	---	---	---
Nickel sulfide roasting, fume.....	---	---	---	---	---
and dust (as Ni).....	---	5	25	---	---
4-Nitrodiphenyl.....	92-93-3	---	---	---	---
Nitrogen mustard.....	55-86-7	---	---	---	---
n-Nitrosodimethylamine.....	62-75-9	---	---	---	---
Oxymetholone.....	434-07-1	---	---	---	---
Perchloroethylene**.....	127-18-4	1,700	8,500	0.25	1.25
Phenacetin.....	62-44-2	---	---	---	---
Polynuclear aromatic hydrocarbons (PAH).....	50-32-8	0.1*	0.5*	---	---
beta-Propiolactone.....	57-57-8	7.5	37.5	2.5 ppbv	12.5 ppbv
1,1,2,2-Tetrachloroethane.....	79-34-5	34.4	172	5.ppbv	25.ppbv
Thorium dioxide.....	1314-20-1	---	---	---	---
o-Toluidine.....	95-53-4	45	225	0.01	0.5
Toxaphene.....	8001-35-2	2.5	12.5	---	---
Treosulfan.....	299-75-2	---	---	---	---
1,1,2-Trichloroethane.....	79-00-5	225	1,125	0.05	0.25
Trichloroethylene.....	79-01-6	1,350	6,750	0.25	1.25
2,4,6-Trichlorophenol.....	88-06-2	---	---	---	---
Vinyl chloride.....	75-01-4	50	250	0.025	0.125

\* Benzene-soluble fraction

\*\* Perchloroethylene has been placed in Group I provisionally, pending further research by the Department of Health Services and the "Hazardous Air Pollutant Review Panel".

Note: Dashed lines indicate that no hazard limiting value has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date

TABLE 29-2

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS*</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Actinomycin D.....	1402-38-6	---	---	---	---	---
Adriamycin.....	23214-92-8	---	---	---	---	---
Aldrin.....	309-00-2	1.5	7.5	---	---	---
Allyl glycidyl ether.....	106-92-3	220	1,100	0.05	0.25	
2-Aminoanthraquinone.....	117-79-3	---	---	---	---	---
1-Amino-2-methylantraquinone.....	82-28-0	---	---	---	---	---
3-Amino 1,2,4-triazole (amitrole).....	61-82-5	---	---	---	---	---
o-Anisidine.....	29191-52-4	5	25	1.ppbv	5.ppbv	
Antimony trioxide, handling & use						
(as Sb).....	1309-64-4	5	25	---	---	---
Antimony trioxide production (as Sb).....	1309-64-4	5	25	---	---	---
Aramite.....	140-57-8	---	---	---	---	---
Arsenic trioxide production (as As).....	1327-53-3	0.25	1.25	---	---	---
Benz(a)anthracene.....	56-55-3	---	---	---	---	---
Benzo (b)fluoranthene.....	205-99-2	---	---	---	---	---
Benzotrichloride.....	98-07-7	---	---	---	---	---
Brominated biphenyls.....						
Butadiene (1,3-butadiene).....	106-99-0	22,000	110,000	10	50	
n-Butyl glycidyl ether (BGE).....	2426-08-6	1,350	6,750	0.25	1.25	
Cadmium.....	7440-43-9	0.4	2.0	---	---	---
Cadmium dust & salts (as Cd).....	7440-43-9	0.4	2.0	---	---	---
Cadmium oxide fume (as Cd).....	1306-19-0	1.0	5.0	---	---	---
Cadmium sulfate.....	10124-36-4	---	---	---	---	---
Carbon tetrachloride.....	50-23-5	300	1,500	0.05	0.25	
Chloramphenicol.....	56-75-7	---	---	---	---	---
1-Chloro ,2,3-epoxypropane.....	106-89-8	20	100	6.ppbv	30.ppbv	
bis-Chloroethyl nitrosourea (BCNU).....	108-60-1	---	---	---	---	---

\* Volumetric units are in parts per million by volume, unless shown as parts per billion by volume (ppbv) or parts per trillion by volume (pptv).

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-2, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	8-HOUR (ug/m <sup>3</sup> )	"HAZARD LIMITING VALUE" ("HLV") VOLUMETRIC UNITS*		
			30-MINUTE	8-HOUR	30-MINUTE
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU).....	13909-09-6	---	---	---	---
Chrysene.....	218-01-9	---	---	---	---
Cisplatin.....	15663-27-1	---	---	---	---
p-Cresidine.....	120-71-8	---	---	---	---
Cupferron.....	135-20-6	---	---	---	---
Cycasin.....	14901-08-7	---	---	---	---
Dacarbazine.....	4342-03-4	---	---	---	---
DDT (Dichlorodiphenyl-trichloro-ethane).....	50-29-3	5	25		
2,4-Diaminoanisole sulfate.....	39156-41-7	---	---	---	---
Dibenzo(a,h) anthracene.....	53-70-3	---	---	---	---
7H-Dibenzo(c,g) carbazole.....	194-59-2	---	---	---	---
Dibenzo(a,h) pyrene.....	189-64-0	---	---	---	---
Dibenzo(a,i) pyrene.....	189-55-9	---	---	---	---
1,2-Dibromoethane.....	106-93-4	1,550	7,750	0.2	1
Dienestrol.....	84-17-3	---	---	---	---
Diepoxybutane.....	1464-53-5	---	---	---	---
Di-2,3-epoxypropyl ether.....	2238-07-5	10	50	---	---
Di(2-ethylhexyl) phthalate.....	117-81-7	50	250	---	---
3-3'-Dimethoxybenzidine.....	119-90-4	---	---	---	---
4-Dimethylaminobenzene.....	1300-73-8	100	500	0.21	0.1
3,3'-Dimethylbenzidine.....	119-93-7	---	---	---	---
Dimethyl carbamoyl chloride.....	79-44-7	---	---	---	---
1,1-Dimethylhydrazine.....	57-14-7	10	50	5.ppbv	25.ppbv
3,3'-Dimethoxybenzidine.....	119-90-4	---	---	---	---
Dinitrotoluene.....	121-14-2	15	75	---	---
Direct Black 38.....	1937-37-7	---	---	---	---
Direct Blue 6.....	2610-05-1	---	---	---	---
Direct Brown 95.....	10300-74-0	---	---	---	---

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-2, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Epichlorhydrin .....	106-89-8	20		100	6.ppbv	30.ppbv
Ethinylestradiol.....	57-63-6	---		---	---	---
Ethylene dibromide.....	106-93-4	1,550		7,750	0.2	1
Ethylene oxide.....	75-21-8	20		100	0.01	0.05
Ethylene thiourea.....	96-45-7	---		---	---	---
Formaldehyde.....	50-00-0	12		60	0.01	0.05
Hexachlorobenzene.....	118-74-1	---		---	---	---
Hexachlorobutadiene.....	87-68-3	2.4		12	---	---
Hexamethyl phosphoramide.....	680-31-9	---		---	---	---
Hydrazine.....	302-01-2	1		5	1.ppbv	5.ppbv
Hydrazine sulfate.....	10034-93-2	---		---	---	---
Hydrazobenzene.....	122-66-7	---		---	---	---
Indeno (1,2,3-cd) pyrene.....	193-39-5	---		---	---	---
Iron dextran complex.....	9004-66-4	---		---	---	---
Isopropyl glycidyl ether (IGE).....	4016-14-2	2,400		12,000	0.5	2.5
Lead acetate.....	301-04-2	---		---	---	---
Lead chromate (as Cr).....	18454-12-1	0.5		2.5	---	---
Lead phosphate.....	7446-27-7	---		---	---	---
Lindane.....	58-89-9	5		25	---	---
Mestranol.....	72-33-3	---		---	---	---
4,4'-Methylene dianiline.....	101-77-9	8		40	1.ppbv	5.ppbv
4,4'-Methylene bis (n,n-dimethyl) benzenamide.....	101-61-1	---		---	---	---
Methyl hydrazine.....	60-34-4	---		---	---	---
Methyl iodide.....	74-88-4	100		500	0.02	0.1
Metronidazole .....	443-48-1	---		---	---	---
Michler's ketone.....	90-94-8	---		---	---	---
Mirex.....	2385-85-5	---		---	---	---
Monomethyl hydrazine.....	60-34-4	---		---	---	---
Nitrilotriacetic acid .....	139-13-9	---		---	---	---

\* Benzene

Note: Dashed lines indicate that no "hzazrd limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-2, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	<u>8-HOUR</u> (ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
5-Nitro-o-anisidine.....	99-59-2	---	---	---	---
Nitrofen.....	1836-75-5	---	---	---	---
2-Nitropropane.....	79-46-9	360	1,800	0.1	0.5
Nitrosamines.....	---	---	---	---	---
n-Nitrosodi-n-butylamine.....	924-16-3	---	---	---	---
n-Nitrosodiethanolamine.....	1116-54-7	---	---	---	---
n-Nitrosodiethylamine.....	55-18-5	---	---	---	---
n-Nitrosodiphenylamine.....	86-30-6	---	---	---	---
n-Nitrosodi-n-propylamine.....	621-64-7	---	---	---	---
n-Nitroso-n-ethylurea.....	759-73-9	---	---	---	---
n-Nitroso-n-methylurea.....	684-93-5	---	---	---	---
n-Nitrosomethylvinylamine.....	4549-40-0	---	---	---	---
n-Nitrosomorpholine.....	59-89-2	---	---	---	---
n-Nitrosonornicotine.....	16543-55-8	---	---	---	---
n-Nitrosopiperidine.....	100-75-4	---	---	---	---
n-Nitrosopyrrolidine.....	930-55-2	---	---	---	---
n-Nitrososarcosine.....	20661-60-3	---	---	---	---
Norethisterone.....	68-22-4	---	---	---	---
Oestradiol-17-beta.....	2529-64-8	---	---	---	---
Oestrone.....	53-16-7	---	---	---	---
Phenazopyridine.....	94-78-0	---	---	---	---
Phenazopyridine hydrochloride.....	136-40-3	---	---	---	---
Phenantoin (and sodium salt).....	50-12-4	---	---	---	---
Phenoxyacetic acid herbicides.....	---	---	---	---	---
Phenyl glycidyl ether (PGE).....	122-60-1	60	300	0.01	0.05
Phenylhydrazine.....	100-63-0	200	1,000	0.05	0.25
Phenyl-2-naphthylamine.....	135-88-6	---	---	---	---
Phenytoin.....	57-41-0	---	---	---	---
Polybrominated biphenyls.....	---	---	---	---	---
Polychlorinated biphenyls: 42% Cl.....	53469-21-9	0.01	0.05	---	---
Polychlorinated biphenyls: 54% Cl.....	11097-69-1	0.01	0.05	---	---
Procarbazine Hydrochloride .....	366-70-1	---	---	---	---

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. the "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-2, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS*</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Progesterone.....	57-83-0	---	---	---	---
Propane sultone.....	1120-71-4	---	---	---	---
Propylene imine.....	75-55-8	50	250	0.02	0.1
Propylthiouracil.....	51-52-5	---	---	---	---
Reserpine.....	50-55-5	---	---	---	---
Saccharine.....	81-07-2	---	---	---	---
Safrole.....	94-59-7	---	---	---	---
Selenium sulfide.....	7446-34-6	---	---	---	---
Streptozotocin.....	18883-66-4	---	---	---	---
Sulfallate.....	95-06-7	---	---	---	---
Tetrachlorinated dibenzo-p-dioxins*.....	1746-01-6	---	---	---	---
Thioacetamide.....	62-55-5	---	---	---	---
Thiotepa.....	52-24-4	---	---	---	---
Thiourea.....	62-56-6	---	---	---	---
o-Tolidine.....	119-93-7	---	---	---	---
p-Toluidine.....	106-49-0	90	450	0.02	0.1
o-Toluidine hydrochloride.....	636-21-5	---	---	---	---
Triaziquone.....	68-76-8	---	---	---	---
Tris (1-aziridinyl) phosphine sulfide.....	140-56-7	---	---	---	---
Tris (2,3-dibromopropyl) phosphate.....	126-72-7	---	---	---	---
Uracil mustard.....	66-75-1	---	---	---	---
Urethane.....	51-79-6	---	---	---	---
Vinyl bromide.....	593-60-2	44	220	11.ppbv	55.ppbv
Vinyl cyclohexene dioxide.....	106-87-6	600	3,000	0.1	0.5
Xyldine.....	1330-73-8	100	500	0.02	0.1
Zinc chromate (as Cr).....	13530-65-9	0.5	2.5	---	---

\* The "HLV" for dioxin is 0.7 picograms per cubic meter (8-hour average). There is no "HLV" in volumetric units. Concentration is expressed in terms of 2,3,7,8 dibenzo-p-dioxin equivalents, as defined in section 22a-174-1. There is an "ambient air quality standard" for this substance contained in section 22a-174-24.

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. the "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	8-HOUR (ug/m <sup>3</sup> )	"HAZARD LIMITING VALUE" ("HLV") VOLUMETRIC UNITS		
			30-MINUTE	8-HOUR	30-MINUTE
Acetaldehyde.....	75-07-0	3,600	18,000	2	10
Acetic acid .....	69-19-7	500	2,500	0.2	1
Acetic anhydride.....	108-24-7	400	2,000	0.1	0.5
Acetone.....	67-64-1	11,800	59,000	5	25
Acetone cyanohydrin.....	75-86-5	---	---	---	---
Acetonitrile.....	75-05-8	680	3,400	0.39	1.95
Acetylene.....	74-86-2	---	---	---	---
Acetylene dichloride.....	540-59-0	15,800	79,000	4	20
Acetylene tetrabromide.....	79-27-6	280	1,400	0.02	0.1
Acetylsalicylic acid .....	50-78-2	100	500	---	---
Acrolein .....	107-02-8	5	25	2.ppbv	10.ppbv
Acrylamide.....	79-06-1	6	30	---	---
Acrylic acid .....	79-10-7	600	3,000	0.2	1
Adiponitrile .....	111-69-3	360	1,800	0.08	0.4
Allyl alcohol.....	107-18-6	100	500	0.04	0.2
Allyl chloride.....	107-05-1	60	300	0.02	0.1
Allyl propyl disulfide.....	2179-59-1	240	1,200	0.04	0.2
Aluminum metal and oxide.....	7429-90-5	200	1,000	---	---
Aluminum pyro powder.....	---	100	500	---	---
Aluminum welding fumes.....	---	100	500	---	---
Aluminum soluble salts.....	---	40	200	---	---
Aluminum alkyls (not otherwise classified).....	---	40	200	---	---
2-Aminoethanol.....	141-43-5	120	600	0.04	0.2
2-Aminopyridine .....	504-29-0	40	200	0.01	0.05
Ammonia .....	7664-41-7	360	1,800	0.5	2.5
Ammonium chloride fume .....	12125-02-9	200	1,000	---	---
Ammonium sulfamate.....	7773-06-0	200	1,000	---	---
n-Amyl acetate.....	628-63-7	10,500	52,500	2	10
sec-Amyl acetate.....	626-38-0	13,000	65,000	2.5	10

Volumetric units are in parts per million by volume, unless shown as parts per billion by volume (ppbv) or parts per trillion by volume (pptv).

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Aniline.....	62-53-3	200	1,000	0.04	0.2
p-Anisidine.....	29191-52-4	10	50	2.ppbv	10.ppbv
Antimony & compounds (as Sb).....	---	10	50	---	---
ANTU (-Naphthyl-thiourea).....	86-88-4	6	30	---	---
Asphalt (petroleum) fumes.....	8052-42-4	100	500	---	---
Atrazine.....	1912-24-9	100	500	---	---
Azinphos-methyl.....	86-50-0	4	20	---	---
Barium (soluble compound) as Ba.....	7440-39-3	10	50	---	---
Baygon (propoxur).....	114-26-1	10	50	---	---
Benomyl.....	17804-35-2	200	1,000	---	---
Benzal chloride.....	98-87-3	---	---	---	---
Benzenethiol.....	108-98-5	40	200	0.01	0.05
Benzo (r,s,t) pentaphene.....	189-55-9	---	---	---	---
p-Benzoquinone.....	106-51-4	8	40	2.ppbv	10.ppbv
Benzoyl chloride.....	98-88-4	---	---	---	---
Benzoyl peroxide.....	94-36-0	100	500	---	---
Benzyl chloride.....	100-44-7	100	500	0.02	0.1
Biphenyl.....	92-52-4	30	150	2.6ppbv	13.ppbv
Bismuth telluride.....	1304-82-1	200	1,000	---	---
Bismuth telluride, Se-doped.....	---	100	500	---	---
Borates, tetra, sodium salts.....					
-anhydrous.....	1303-96-4	20	100	---	---
-decahydrate.....	1303-96-4	100	500	---	---
-pentahydrate.....	1303-96-4	20	100	---	---
Boron oxide.....	1303-86-2	200	1,000	---	---
Boron tribromide.....	10294-33-4	200	1,000	0.02	0.1
Boron trifluoride.....	7637-07-2	---	---	---	---
Bromacil.....	314-40-9	200	1,000	0.02	0.1
Bromine.....	7726-95-6	14	70	2.ppbv	10.ppbv
Bromine pentafluoride.....	7789-30-2	14	70	2.ppbv	10.ppbv

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Bromochloromethane/chlorobromomethane.....	74-97-5	21,000	105,000	4	20
Bromoform.....	75-25-2	100	500	0.01	0.05
Butane.....	106-97-8	38,000	190,000	16	80
1-Butanethiol.....	109-79-5	30	150	0.01	0.05
2-Butanethiol.....	513-53-1	30	150	0.01	0.05
2-Butanone.....	78-93-3	11,800	59,000	4	20
2-Butoxyethanol.....	111-76-2	2,400	12,000	0.5	2.5
n-Butyl acetate.....	123-86-4	14,200	71,000	3	15
sec-Butyl acetate.....	105-46-4	19,000	95,000	4	20
tert-Butyl acetate.....	540-88-5	19,000	95,000	4	20
Butyl acrylate.....	141-32-2	1,100	5,500	0.2	1
n-Butyl alcohol.....	71-36-3	6,000	30,000	2	10
sec-Butyl alcohol.....	78-92-2	6,100	30,500	2	10
tert-Butyl alcohol.....	75-65-1	6,000	30,000	2	10
Butylamine.....	109-73-9	---	---	---	---
tert-Butyl chromate (as CrO <sub>3</sub> ).....	1189-85-1	---	---	---	---
n-Butyl lactate.....	138-22-7	500	2,500	0.1	0.5
Butyl mercaptan.....	109-79-5	30	150	0.01	0.05
o-sec-Butylphenol.....	89-72-5	600	3,000	0.1	0.5
p-tert-Butyltoluene.....	98-51-1	1,200	6,000	0.2	1
n-Butyronitrile.....	109-74-0	440	2,200	0.16	0.8
Cadmium oxide production.....	1306-19-0	1	5	---	---
Calcium arsenate (as As).....	7778-44-1	---	---	---	---
Calcium cyanamide .....	156-62-7	10	50	---	---
Calcium hydroxide.....	1305-62-0	100	500	---	---
Calcium oxide.....	1305-78-8	40	200	---	---
Camphor, synthetic.....	76-22-2	240	1,200	0.04	0.2
Caprolactam dust.....	105-60-2	20	100	---	---
Caprolactam vapor.....	105-60-2	400	2,000	0.1	0.5
Captafol (difolatan).....	2425-06-1	2	10	---	---

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Captan.....	113-06-2	100	500	---	---
Carbaryl (Sevin).....	63-25-2	100	500	---	---
Carbofuran (Furadan).....	1563-66-2	2	10	---	---
Carbon black.....	1333-86-4	70	350	---	---
Carbon disulfide.....	75-15-0	60	300	0.02	0.1
Carbon tetrabromide.....	558-13-4	28	140	2.ppbv	10.ppbv
Carbonyl chloride (Phosgene).....	75-44-5	8	40	2.ppbv	10.ppbv
Carbonyl fluoride.....	353-50-4	100	500	0.04	0.2
Catechol.....	120-80-9	400	2,000	0.1	0.5
Cesium hydroxide.....	21351-79-1	40	200	---	---
2-Chloraniline.....	106-47-8	0.06	0.3	0.01 ppbv	0.05 ppbv
Chlorinated diphenyl oxide.....	55720-99-5	10	50	---	---
Chlorine.....	7782-50-5	60	300	0.02	0.1
Chlorine dioxide.....	10049-04-4	6	30	2.ppbv	10.ppbv
Chlorine trifluoride.....	7790-91-2	---	---	---	---
Chlormadione acetate.....	302-22-7	---	---	---	---
Chloroacetaldehyde.....	107-20-0	---	---	---	---
alpha-Chloroacetophenone (Phenacyl chloride).....	532-27-4	6	30	1.ppbv	5.ppbv
Chloroacetyl chloride.....	79-04-0	4	20	1.ppbv	5.ppbv
Chlorobenzene.....	108-90-7	7,000	35,000	1.5	7.5
o-Chlorobenzylidene malonitrile.....	2698-41-1	8	40	1.ppbv	5.ppbv
Chlorobromomethane/bromochloromethane.....	74-97-5	21,000	105,000	4	20
2-Chloro-1,3-butadiene.....	126-99-8	900	4,500	0.2	1
Chlorodifluoromethane.....	75-45-6	70,000	350,000	20	100
Chlorodiphenyl (42% Chlorine).....	53469-21-9	20	100	---	---
Chlorodiphenyl (54% Chlorine).....	11097-69-1	10	50	---	---
2-Chloroethanol.....	107-07-3	320	1,600	0.1	0.5
Chloropentafluorethane.....	76-15-3	126,400	632,000	20	100
1-Chloro-1-nitro-propane.....	600-25-9	200	1,000	0.04	0.2

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Chloropicrin .....	76-06-2	14		70	2.ppbv	10.ppbv
beta-Chloroprene.....	126-99-8	900		4,500	0.2	1
o-Chlorostyrene.....	1331-28-8	5,700		28,500	1	5
o-Chlorotoluene.....	95-49-8	5,000		25,000	1	5
Chloropyrifos (Dursban).....	2921-88-2	4		20	---	---
Chromium (II) compounds as Cr.....	---		10	50	---	---
Chromium (III) compounds as Cr.....	---		10	50	---	---
Chromium (IV) compounds, non-carcinogenic as Cr.....	---		0.5	2.5	---	---
Chromyl chloride.....	14977-61-8		3	15	0.5ppbv	2.5 ppbv
Clofibrate.....	637-07-1	---	---	---	---	---
Clomiprene.....	911-45-5	---	---	---	---	---
Clopidol.....	2971-90-6	200		1,000	---	---
Coal dust.....	---		40	200	---	---
Cobalt metal, dust & fume (as Co).....	7440-48-4		2	10	---	---
Cobalt carbonyl, as Co.....	00000-00-0		2	10	---	---
Cobalt hydrocarbonyl, (as Co).....	16842-03-8		2	10	---	---
Copper – dusts & mists (as Cu).....	7440-50-8		20	100	---	---
Copper fume .....	7440-50-8		2	10	---	---
Cotton dust, raw.....	---		4	20	---	---
Crag herbicide .....	556-22-9	300		1,500	---	---
Cresol.....	1319-77-3	200		1,000	0.048	0.24
Crotonaldehyde.....	123-73-9	120		600	0.04	0.2
Crufomate.....	299-86-5	100		500	---	---
Cumene.....	98-82-8	4,900		24,500	1	5
Cyanamide.....	420-04-2		40	200	---	---
Cyanides, as CN.....	51-50-8		100	500	---	---
.....	143-33-9		100	500	---	---
Cyanogen.....	460-19-5		400	2,000	0.2	1
Cyanogen chloride.....	506-77-4	---	---	---	---	---

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Cyclamates.....	100-88-9	---	---	---	---	---
Cyclohexane.....	110-82-7	21,000	105,000	6	30	
Cyclohexanethiol.....	1569-69-3	---	---	---	---	
Cyclohexanol.....	108-93-0	4,000	20,000	1	5	
Cyclohexanone.....	108-94-1	2,000	10,000	0.5	2.5	
Cyclohexene.....	110-83-8	20,300	101,500	6	30	
Cyclohexylamine.....	108-91-8	800	4,000	0.2	1	
Cyclonite.....	121-82-4	30	150	---	---	
Cyclopentadiene.....	542-92-7	4,000	20,000	1.5	7.5	
Cyclopentane.....	287-92-3	17,000	85,000	6	30	
Cyhexatin.....	13121-70-5	---	---	---	---	
2,4-D (2,4-Dichlorophenoxyacetic acid).....	94-75-7	200	1,000	---	---	
Dalapon.....	75-99-0	120	600	0.02	0.1	
Dapsone.....	80-08-0	---	---	---	---	
Decaborane.....	17702-41-9	6	30	1.ppbv	5.ppbv	
Decanethiol.....	143-10-2	---	---	---	---	
Demeton.....	8065-48-3	2	10	0.2ppbv	1.ppbv	
Diacetone alcohol.....	123-42-2	4,800	24,000	1	5	
1,2-Diaminoethane.....	107-15-3	500	2,500	0.2	1	
Diazinon.....	333-41-5	2	10	---	---	
Diazomethane.....	334-88-3	8	40	4.ppbv	20.ppbv	
Diborane.....	19287-45-7	2	10	2.ppbv	10.ppbv	
Dibrom.....	300-76-5	60	300	---	---	
2-n-Dibutylaminoethanol.....	102-81-8	280	1,400	0.04	0.2	
Dibutyl phosphate.....	107-66-4	100	500	0.02	0.1	
Dibutyl phthalate.....	84-74-2	100	500	---	---	
Dichloroacetylene.....	7572-29-4	---	---	---	---	
o-Dichlorobenzene.....	95-50-1	---	---	---	---	
p-Dichlorobenzene.....	106-46-7	9,000	45,000	1.5	7.5	

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Dichlorodifluoromethane.....	75-71-8	99,000	495,000	20	100
1,3-Dichloro-5,5-dimethyl hydantoin.....	118-52-5	4	20	---	---
1,1-Dichloroethane.....	75-34-3	8,000	40,000	2	10
1,2-Dichloroethylene.....	540-59-0	15,800	79,000	4	20
Dichloroethyl ether.....	111-44-4	600	3,000	0.1	0.5
Dichloromethane.....	75-09-2	7,000	35,000	2	10
Dichloromonofluoromethane.....	75-43-4	800	4,000	0.2	1
1,1-Dichloro-1-nitroethane.....	594-72-9	200	1,000	0.04	0.2
Dichloropropene.....	542-75-6	100	500	0.02	0.1
2,2-Dichloropropionic acid .....	75-99-0	120	600	0.02	0.1
Dichlorotetrafluoroethane.....	76-14-2	140,000	700,000	20	100
Dichlorvos (DDVP).....	62-73-7	20	100	2.ppbv	10.ppbv
Dicrotophos (Bidrin).....	141-66-2	5	25	---	---
Dicyclohexyl methane 4,4'-diisocyanate.....	---	1.1	5.5	---	---
Dicyclopentadiene.....	77-73-6	600	3,000	0.1	0.5
Dicyclopentadienyl iron.....	102-54-5	200	1,000	---	---
Dieldrin .....	60-57-1	5	25	---	---
Diethanolamine.....	111-42-2	300	1,500	0.06	0.3
Diethylamine.....	109-89-7	600	3,000	0.2	1
Diethylaminoethanol.....	100-37-8	1,000	5,000	0.2	1
Diethyl ether.....	60-29-7	24,000	120,000	8	40
Diethyl ketone.....	96-22-0	14,100	70,500	4	20
Diethyl phthalate.....	84-66-2	100	500	---	---
Diethylene triamine .....	111-40-0	80	400	0.02	0.1
Difluorodibromomethane.....	75-61-6	17,200	86,000	2	10
Diglycidal ether.....	2238-07-5	10	50	2.ppbv	10.ppbv
Diisobutyl ketone.....	108-83-8	2,800	14,000	0.46	2.3
Diisocyanates, not listed.....	---	---	---	0.1 ppbv	0.5 ppbv
Diisopropylamine.....	108-18-9	400	2,000	0.1	0.5

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Dimethisterone.....	79-64-1	---	---	---	---	---
Dimethoxymethane.....	109-87-5	62,000	310,000	20	100	
Dimethyl acetamide.....	127-19-5	700	3,500	0.2	1	
Dimethylamine.....	124-40-3	360	1,800	0.2	1	
Dimethylaniline.....	121-69-7	500	2,500	0.1	0.5	
Dimethylformamide.....	68-12-2	600	3,000	0.2	1	
Dimethylphthalate.....	131-11-3	100	500	---	---	
Dinitolmide.....	148-01-6	100	500	---	---	
Dinitrobenzene-o isomer.....	528-29-0	20	100	3.ppbv	15.ppbv	
Dinitrobenzene-m isomer.....	99-65-0	20	100	3.ppbv	15.ppbv	
Dinitrobenzene-p isomer.....	100-25-4	20	100	3.ppbv	15.ppbv	
Dinitro-o-Cresol.....	534-52-1	4	20	---	---	
3,5-Dinitro-o-toluamide (Dinitolmide).....	148-01-6	100	500	---	---	
Dioxathion (Delnav).....	78-34-2	4	20	---	---	
Diphenyl.....	92-52-4	20	100	2.6 ppbv	13.ppbv	
Diphenylamine.....	122-39-4	200	1,000	---	---	
Diphenylmethane diisocyanate.....	101-68-8	1	5	---	---	
Diphenylphthalate.....	---	---	---	---	---	
Dipropylene glycol methyl ether.....	34590-94-8	12,000	60,000	2	10	
Dipropyl ketone.....	123-19-3	4,700	23,500	1	5	
Diquat.....	85-00-7	10	50	---	---	
Di-sec octyl phthalate.....	117-81-7	100	500	---	---	
Disulfiram.....	97-77-8	40	200	---	---	
Disulfoton.....	298-04-4	2	10	---	---	
Disyston.....	298-04-4	2	10	---	---	
2,6-Ditert butyl-p-cresol.....	128-37-0	200	1,000	---	---	
Diuron.....	330-54-1	200	1,000	---	---	
Divinyl benzene.....	108-57-6	1,000	5,000	---	---	
Dodecanethiol.....	---	---	---	---	---	
Dyfonate.....	944-22-9	2	10	---	---	
Endosulfan.....	115-29-7	2	10	---	---	

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Endrin.....	72-20-8	2		10	---	---
EPN.....	2104-64-5	10		50	---	---
Ethane.....	74-84-0	---		---	---	---
Ethanol.....	64-17-5	38,000		190,000	20	100
Ethanolamine.....	141-43-5	120		600	0.04	0.2
Ethion.....	563-12-2	8		40	---	---
2-Ethoxyethanol.....	110-80-5	380		1,900	0.1	0.5
2-Ethoxyethyl acetate.....	111-15-9	540		2,700	0.1	0.5
Ethyl acetate.....	141-78-6	28,000		140,000	8	40
Ethyl acrylate.....	140-88-5	400		2,000	0.1	0.5
Ethylamine.....	75-04-7	360		1,800	0.2	1
Ethyl sec-amyl ketone.....	541-85-5	2,600		13,000	0.6	3
Ethyl benzene.....	100-41-4	8,700		43,500	2	20
Ethyl bromide.....	74-96-4	17,800		89,000	4	20
Ethylbutyl ketone.....	106-35-4	4,600		23,000	1	5
Ethyl chloride.....	75-00-3	52,000		260,000	20	100
Ethylene.....	74-85-1	---		---	---	---
Ethylene chlorohydrin.....	107-07-3	320		1,600	0.1	0.5
Ethylenediamine.....	107-15-3	500		2,500	0.2	1
Ethylene glycol dinitrate.....	628-96-6	6		30	1.ppbv	5.ppbv
Ethylene glycol monomethyl ether acetate.....	110-49-6	480		2,400	0.1	0.5
Ethylene glycol, vapor.....	107-21-1	---		---	---	---
Ethylenimine.....	151-56-4	20		100	0.01	0.05
Ethyl ether.....	60-29-7	24,000		120,000	8	40
Ethyl formate.....	109-94-4	6,000		30,000	2	10
Ethyldiene norbornene.....	16219-75-3	---		---	---	---
Ethyl mercaptan.....	75-08-1	20		100	0.01	0.05

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
n-Ethylmorpholine.....	100-74-3	460		2,300	0.1	0.5
Ethyl silicate.....	78-10-4	1,700		8,500	0.2	1
Ethynodiol acetate.....	297-76-7	---		---	---	---
Fenamiphos.....	22224-92-6	2		10	---	---
Fensulfothion (Dasanit).....	115-90-2	2		10	---	---
Fenthion.....	55-38-9	4		20	---	---
Ferbam.....	14484-64-1	200		1,000	---	---
Ferrovanadium dust.....	12604-58-9	20		100	---	---
Fluorides (as F).....	---	50		250	---	---
Fluorine .....	7782-41-1	4		20	2.ppbv	10.ppbv
Fluorotrichchloromethane.....	75-69-4	112,000		560,000	20	100
5-Fluorouracil.....	51-21-8	---		---	---	---
Fonofos.....	944-22-9	2		10	---	---
Formamide.....	75-12-7	600		3,000	0.4	2
Formic acid .....	64-18-6	180		900	0.1	0.5
Furfural.....	98-01-1	160		800	0.04	0.2
Furfuryl alcohol.....	98-00-0	800		4,000	0.2	1
Gasoline .....	8006-61-9	18,000		90,000	6	30
Germanium tetrahydride.....	7782-65-2	12		60	4.ppbv	20.ppbv
Glass (dust).....	---	100.*		500.*	---	---
Glass (fibrous)**.....	---	---		---	---	---
Glutaraldehyde, activated or unactivated.....	111-30-8	14		70	---	---
Glycerin mist.....	56-81-5	---		---	---	---
Glycidol.....	556-52-5	1,500		7,500	0.5	2.5

\* Respirable

\*\* The "HLV" for fibrous glass is 60,000 fibers of a length of 5 microns or greater per cubic meter (8-hour average) or 300,000 fibers of length of 5 microns or greater per cubic meter (30-minute average)

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Glyconitrile.....	107-16-4	---		---	---	---
Guthion (Azinphos-Methyl).....	86-50-0	4		20	---	---
Hafnium.....	7440-58-6	10		50	---	---
Hematite.....	1317-60-8	---		---	---	---
Heptane (n-Heptane).....	142-82-5	7,000		35,000	1.75	8.75
Heptanethiol.....	1639-09-4	---		---	---	---
Hexachlorocyclohexane.....	319-85-7	---		---	---	---
Hexachlorocyclopentadiene.....	77-47-4	2		10	0.2	1
Hexachloronaphthalene.....	1335-87-1	4		20	---	---
Hexadecanethiol.....	---	---		---	---	---
Hexafluoroacetone.....	684-16-2	14		70	2.ppbv	10.ppbv
Hexamethylene diisocyanate.....	822-06-0	0.7		3.5	---	---
Hexan (n-hexane).....	110-54-3	3,600		18,000	1	5
Hexane, other isomers .....	110-54-3	36,000		180,000	10	50
Hexanethiol.....	111-31-9	---		---	---	---
2-Hexanone.....	591-78-6	400		2,000	0.1	0.5
Hexone.....	108-10-1	4,100		20,500	1	5
sec-Hexyl acetate.....	108-84-9	6,000		30,000	1	5
Hexylene glycol.....	107-41-5	---		---	---	---
Hydralazine.....	86-54-4	---		---	---	---
Hydrazinobenzene.....	100-63-0	400		2,000	0.1	0.5
Hydrochloride o-anisidine.....	---	---		---	---	---
Hydrogenated terphenyls .....	92-94-4	100		500	0.01	0.05
Hydrogen bromide.....	10035-10-6	200		1,000	0.06	0.3
Hydrogen chloride.....	7647-01-0	---		---	---	---
Hydrogen cyanide.....	74-90-8	220		1,100	0.2	1
Hydrogen fluoride.....	7664-39-3	50		250	0.06	0.3
Hydrogen peroxide.....	7722-84-1	28		140	0.02	0.1
Hydrogen selenide.....	7783-07-5	4		20	1.ppbv	5.ppbv
Hydrogen sulfide.....	7783-06-4	280		1,400	0.2	1

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	8-HOUR (ug/m <sup>3</sup> )	"HAZARD LIMITING VALUE" ("HLV") VOLUMETRIC UNITS		
			30-MINUTE	8-HOUR	30-MINUTE
Hydroquinone.....	123-31-9	40	200	---	---
17x-Hydroxyprogesterone caproate.....	---	---	---	---	---
2-Hydroxypropyl acrylate.....	999-61-1	60	300	0.01	0.05
Indene.....	95-13-6	900	4,500	0.2	1
Indium & Compounds (as In).....	7440-74-6	2	10	---	---
Iodine.....	7553-56-2	---	---	---	---
Iodoform.....	75-47-8	200	1,000	0.012	0.06
Iron oxide fume.....	1309-37-1	100	500	---	---
Iron pentacarbonyl.....	13463-40-6	16	80	2.ppbv	10.ppbv
Iron salts, soluble (as Fe).....	---	20	100	---	---
Isoamyl acetate.....	123-92-2	10,500	52,500	2	10
Isoamyl alcohol.....	123-51-3	7,200	36,000	2	10
Isobutyl acetate.....	110-19-0	14,000	70,000	3	15
Isobutyl alcohol.....	78-83-1	3,000	15,000	1	5
Isobutyronitrile .....	78-82-0	440	2,200	0.16	0.8
Isonicotinic acid hydrazide.....	55-22-1	---	---	---	---
Iooctyl alcohol.....	26952-21-6	5,400	27,000	1	5
Isophorone.....	78-59-1	460	2,300	0.1	0.5
Isophorone diisocyanate.....	4098-71-9	0.9	4.5	0.1ppbv	0.5 pbv
Isopropoxyethanol.....	109-59-1	2,100	10,500	0.5	2.5
Isopropyl acetate.....	108-21-4	19,000	95,000	5	25
Isopropyl alcohol.....	67-63-0	19,600	98,000	8	40
Isopropylamine.....	75-31-0	240	1,200	0.1	0.5
n-Isopropyl aniline.....	643-28-7	200	1,000	0.04	0.2
Isopropyl ether.....	108-20-3	21,000	105,000	5	25
Isopropyl oils.....	---	---	---	---	---
Kerosene.....	8008-20-6	2,000	10,000	---	---
Ketene.....	463-51-4	18	90	0.01	0.05
Lead, inorg., fumes & dusts (as Pb).....	7439-92-1	3	15	---	---
Lead arsenate (as Pb).....	10102-48-4	3	15	---	---
Liquified petroleum gas .....	---	36,000	180,000	20	100

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Lithium hydride.....	7580-67-8	0.5	2.5	---	---
Lynoestrenol.....	52-76-6	---	---	---	---
Magenta.....	632-99-5	---	---	---	---
Magnesite.....	546-93-0	---	---	---	---
Magnesium oxide fume .....	1309-48-8	200	1,000	---	---
Malathion.....	121-75-5	200	1,000	---	---
Maleic anhydride.....	108-31-6	20	100	5.ppbv	25.ppbv
Malonitrile .....	109-77-3	160	800	0.06	0.3
Manganese dust & compounds (as Mn).....	7489-96-5	---	---	---	---
Manganese cyclopentadienyl tricarbonyl (as Mn).....	12079-65-1	2	10	---	---
Manganese fume (as Mn).....	7439-96-5	20	100	---	---
Manganese tetroxide.....	1317-35-7	20	100	---	---
Medroxyprogesterone acetate.....	71-58-9	---	---	---	---
Magestrol acetate.....	595-33-5	---	---	---	---
6-Mercaptopurine.....	50-44-2	---	---	---	---
Mercury (alkyl compounds) (as Hg).....	---	0.2	1	---	---
Mercury (all forms except alkyl) (as Hg).....	---	---	---	---	---
vapor.....	---	1	5	---	---
aryl and inorganic compounds.....	---	2	10	---	---
Mesityl oxide.....	141-79-7	800	4,000	0.2	1
Methacrylic acid.....	79-41-4	1,400	7,000	0.4	2
Methanethiol.....	74-93-1	20	100	0.01	0.05
Methanol.....	67-56-1	5,200	26,000	4	20
Methomyl.....	16752-77-5	50	250	---	---
Methotrexate.....	59-05-2	---	---	---	---
Methoxychlor.....	72-43-5	200	1,000	---	---
2-Methoxyethanol.....	109-86-4	320	1,600	0.1	0.5
2-Methoxyethyl acetate.....	110-49-6	480	2,400	0.1	0.5
4-Methoxyphenol.....	150-76-5	100	500	---	---

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>		
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>
Methyl acetate.....	79-20-9	12,200	61,000	4	20
Methyl acetylene.....	74-99-7	33,000	165,000	20	100
Methyl acetylene-propadiene mixture .....	---	36,000	180,000	20	100
Methyl acrylate.....	96-33-3	700	3,500	0.2	1
Methylacrylonitrile .....	126-98-7	60	300	0.02	0.1
Methylal.....	109-87-5	62,000	310,000	20	100
Methylamine.....	74-89-5	240	1,200	0.2	1
Methyl n-amyl ketone.....	110-43-0	4,700	23,500	1	5
n-Methyl aniline.....	100-61-8	40	200	0.01	0.05
Methyl bromide.....	74-83-9	1,200	6,000	0.3	1.5
Methyl butyl ketone.....	591-78-6	80	400	28.ppbv	0.14
Methyl cellosolve.....	109-86-4	320	1,600	0.1	0.5
Methyl cellosolve acetate.....	110-49-6	480	1,200	0.1	0.5
Methyl chloride.....	74-87-3	2,100	10,500	1	5
Methyl chloroform.....	71-55-6	38,000	190,000	7	35
Methyl 2-cyanoacrylate.....	137-05-3	160	800	0.04	0.2
Methylcyclohexane.....	108-87-2	32,000	160,000	8	40
Methylcyclohexanol.....	25639-42-3	4,700	23,500	1	5
o-Methylcyclohexanone.....	583-60-8	4,600	23,000	1	5
Methylcyclopentadienyl manganese tricarbonyl (as Mn).....	12108-13-3	4	20	2.ppbv	10.ppbv
Methyl demeton.....	8022-00-2	10	50	---	---
Methylene bis (4-cyclo-hexyl-isocyanate).....	5124-30-1	---	---	---	---
Methylene chloride.....	75-09-2	7,000	35,000	2	10
Methylene diphenyl isocyanate (MDI).....	101-68-8	1	5	---	---
Methyl ethyl ketone (MEK).....	78-93-3	11,800	59,000	4	20
Methyl ethyl ketone peroxide.....	1338-23-4	---	---	---	---
Methyl formate.....	107-31-3	5,000	25,000	2	10
Methyl isoamyl ketone.....	110-12-3	4,600	23,000	0.96	4.8
Methyl isobutyl carbinol.....	108-11-2	2,000	10,000	0.5	2.5

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Methyl isobutyl ketone.....	108-10-1	4,000		20,000	1	5
Methyl isocyanate.....	624-83-9	1		5	0.4 ppbv	2.ppbv
Methyl isopropyl ketone.....	563-80-4	14,100		70,500	4	20
Methyl mercaptan.....	74-93-1	20		100	0.01	0.05
Methyl methacrylate .....	80-62-6	8,200		41,000	2	10
Methyl parathion.....	298-00-0	4		20	---	---
Methyl n-propyl ketone.....	107-87-9	10,600		53,000	2.8	14
Methyl silicate.....	681-84-5	120		600	0.02	0.1
Methyl styrene.....	98-83-9	4,800		24,000	1	5
Metribuzin .....	21087-64-9	100		500	---	---
Mevinphos.....	7786-34-7	2		10	2.ppbv	10.ppbv
Mica*.....	---	---		---	---	---
Mineral wool fiber.....	---	200		1,000	---	---
Molybdenum (as Mo) soluble compounds.....	---	100		500	---	---
Molybdenum (insoluble compounds).....	---	200		1,000	---	---
Monocrotophos.....	6923-22-4	5		20	---	---
Monomethyl aniline.....	100-61-8	40		200	0.01	0.05
Naled.....	300-76-5	60		300	---	---
Naphtha**.....	---	8,000		40,000	2	10
Naphthalene.....	91-20-3	1,000		5,000	0.2	1
Naphthalene diisocyanate.....	39394-45-1	0.8		4	---	---
1-Naphthylamine.....	134-32-7	---		---	---	---
Nickel (II) oxide.....	1313-99-1	0.3		1.5	---	---
Nickel (III) oxide.....	1314-06-3	0.3		1.5	---	---

\* The "HLV" for mica is 0.4 million particles per cubic foot (mppcf), eight-hour average and 2 mppcf, 30-minute average.

\*\* See also VM&P Naphtha

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Nickel, other soluble compounds (as Ni)***.....	---	0.3		1.5	---	---
Nicotine.....	54-11-5	10		50	---	---
Nitrapyrin.....	1929-82-4	200		1,000	---	---
Nitric acid.....	7697-37-2	100		500	0.04	0.2
Nitric oxide.....	10102-43-9	600		3,000	0.5	2.5
p-Nitroaniline.....	100-01-6	60		300	0.01	0.05
Nitrobenzene.....	98-95-3	100		500	0.02	0.1
p-Nitrochlorobenzene.....	100-00-5	20		100	---	---
Nitroethane.....	79-24-3	6,200		31,000	2	10
Nitrogen trifluoride.....	7783-54-2	580		2,900	0.2	1
Nitroglycerin.....	55-63-0	10		50	1.ppbv	5.ppbv
Nitromethane.....	75-52-5	5,000		25,000	2	10
1-Nitropropane.....	108-03-2	1,800		9,000	0.5	2.5
Nitrotoluene.....	99-08-1	220		1,100	0.04	0.2
Nitrous oxide.....	10024-97-2	1,340		6,700	0.73	3.65
Nonane.....	111-84-2	21,000		105,000	4	20
Nonanethiol.....	1455-21-6	---		---	---	---
Norethynodrel.....	68-23-4	---		---	---	---
Norgestrel.....	6533-00-2	---		---	---	---
Octachloronaphthalene.....	2234-13-1	2		10	---	---
Octadecanethiol.....	---	---		---	---	---
Octane.....	111-65-9	7,000		35,000	1.4	7
Octanethiol.....	111-86-6	---		---	---	---
Oil mist, mineral.....	8012-95-1	100		500	---	---
Osmium tetroxide (as Os).....	20816-12-0	0.04		0.2	4.pptv	20.pptv
Oxalic acid.....	144-62-7	20		100	---	---
Oxygen difluoride.....	7783-41-7	2		10	1.ppbv	5.ppbv
Paraffin wax fume.....	8002-74-2	40		200	---	---
Paraquat, respirable sizes.....	1910-42-5	2		10	---	---
Parathion.....	56-38-2	2		10	---	---

\*\*\* Non-carcinogens

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Pentaborane.....	19624-22-7	0.2		1	0.1 ppbv	0.5 ppbv
Pentachloronaphthalene.....	1321-64-8	10		50	---	---
Pentachlorophenol.....	87-86-5	10		50	---	---
Pentaerythritol.....	115-77-5	300		1,500	---	---
Pentane.....	109-66-0	7,000		35,000	2.3	11.7
Pantanethiol.....	110-66-7	---		---	---	---
2-Pantanone.....	107-87-9	10,600		53,000	2.8	14
Perchloromethyl mercaptan.....	594-42-3	16		80	2.ppbv	10.ppbv
Perchloryl fluoride.....	7616-94-6	270		1,350	0.06	0.3
Perlite.....	---	0.6		3	---	---
		mppcf*		mppcf*		
Phenelzine.....	51-71-8	---		---	---	---
Phenobarbital.....	50-06-6	---		---	---	---
Phenol.....	108-95-2	380		1,900	0.1	0.5
Phenothiazine.....	92-84-2	100		500	---	---
Phenylbutazone.....	50-33-9	---		---	---	---
p-Phenylenediamine.....	106-50-3	2		10	---	---
Phenyl ether (vapor).....	101-84-8	140		700	0.02	0.1
Phenyl ether-Diphenyl mixture (vapor).....	---	140		700	0.02	0.1
Phenyl mercaptan.....	108-98-5	40		200	0.01	0.05
Phenyl-l-naphthylamine.....	90-30-2	---		---	---	---
Phenylphosphine.....	638-21-1	---		---	---	---
Phorate (Thimet).....	298-02-2	1		5	---	---
Phosdrin (Mevinphos).....	7786-34-7	2		10	2.ppbv	10.ppbv
Phosgene (carbonyl chloride).....	75-44-5	8		40	2.ppbv	10.ppbv
Phosphine.....	7803-51-2	8		40	6.ppbv	30.ppbv

\* mppcf: millions of particles per cubic foot

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Phosphoric acid .....	7664-38-2	20		100	---	---
Phosphorus (yellow).....	7723-14-0	2		10	---	---
Phosphorus oxychloride.....	10025-87-3	12		60	2.ppbv	10.ppbv
Phosphorus pentachloride.....	10026-13-8	20		100	2.ppbv	10.ppbv
Phosphorus pentasulfide.....	1314-80-3	20		100	---	---
Phosphorus trichloride.....	7719-12-2	30		150	4.ppbv	20.ppbv
Phthalic anhydride.....	85-44-9	120		600	0.02	0.1
m-Phthalodinitrile.....	626-17-5	100		500	---	---
Picloram.....	1918-02-1	200		1,000	---	---
Picric acid .....	88-89-1	2		10	---	---
Pindone.....	83-26-1	2		10	---	---
Piperazine dihydrochloride.....	142-64-3	100		500	---	---
Pival (2-Pivalyl-1,3-indandione).....	83-26-1	2		10	---	---
Platinum (metal).....	7440-06-4	20		100	---	---
Platinum (soluble salts) (as Pt).....	---	0.04		0.2	---	---
Polytetrafluoroethylene decomposition products.....	---	---		---	---	---
Potassium hydroxide.....	1310-58-3	---		---	---	---
Prednisone.....	53-03-2	---		---	---	---
Propane.....	74-98-6	---		---	---	---
Propanethiol.....	75-33-2	36,000		180,000	---	---
Propargyl alcohol.....	107-19-7	40		200	0.02	0.1
Propionic acid .....	79-09-4	600		3,000	0.2	1
Propionitrile .....	107-12-0	280		1,400	0.12	0.6
Propoxur.....	114-26-1	10		50	---	---
n-Propyl acetate.....	109-60-4	16,800		84,000	4	20
Propyl alcohol.....	71-23-8	10,000		50,000	4	20
Propylene.....	115-07-1	---		---	---	---
Propylene dichloride.....	78-87-5	7,000		35,000	1.5	7.5
Propylene glycol dinitrate.....	6423-43-4	6		30	1.ppbv	5.ppbv

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Propylene glycol monomethyl ether.....	107-98-2	7,200		36,000	2	10
Propylene oxide.....	75-56-9	1,000		5,000	0.4	2
n-Propyl nitrate.....	627-13-4	2,100		10,500	0.5	2.5
Pyrethrum.....	8003-34-7	100		500	---	---
Pyridine.....	110-86-1	300		1,500	0.1	0.5
Quinone.....	106-51-4	8		40	2.ppbv	10.ppbv
RDX.....	121-82-4	30		150	---	---
Resorcinol.....	108-46-3	900		4,500	0.2	1
Rhodium, Metal fume & dusts (as Rh).....	7440-16-6	2		10	---	---
- insoluble compounds.....	---	20		100	---	---
- soluble salts (as Rh).....	---	0.02		0.1	---	---
Ronnel.....	299-84-3	200		1,000	---	---
Rosin core solder pyrolysis products (as formaldehyde).....	---	2		10	---	---
Rotenone (commercial).....	83-79-4	100		500	2.ppbv	10.ppbv
Rouge.....	1309-37-1	---		---	---	---
Selenium compounds (as Se).....	---	4		20	---	---
Selenium hexafluoride.....	7783-79-1	4		20	1.ppbv	5.ppbv
Sesone.....	136-78-7	200		1,000	---	---
Silane.....	7803-62-5	140		700	0.1	0.5
Silica, amorphous.....	60676-86-0	---		---	---	---
Silicon carbide.....	409-21-2	---		---	---	---
Silver, metal.....	7440-22-4	0.2		1	---	---
Silver, soluble compounds.....	---	0.2		1	---	---
Soapstone*.....	---	---	---	---	---	---

\* The "HLV" for soapstone is 0.4 million particles per cubic foot (mppcf), eight-hour average and 2 mppcf, 30-minute average

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Sodium azide.....	26628-22-8	---	---	---	---	---
Sodium bisulfite.....	7631-90-5	100	500	---	---	---
Sodium fluoroacetate (1080).....	62-74-8	1	5	---	---	---
Sodium hydroxide.....	1310-73-2	40	200	---	---	---
Sodium metabisulfite.....	7681-57-4	100	---	---	---	---
Spironolactone.....	52-01-7	---	---	---	---	---
Stibine.....	7803-52-3	10	50	2.ppbv	10.ppbv	
Stoddard solvent.....	8052-41-3	7,000.**	35,000.**	1.22**	6.1**	
Strychnine.....	57-24-9	3	15	---	---	---
Styrene, monomer.....	100-42-5	4,300	21,500	1	5	
Styrene oxide.....	96-09-3	---	---	---	---	---
Subtilisins (proteolytic enzymes as 100% pure crystalline enzyme).....	1395-21-7	---	---	---	---	---
Succinonitrile.....	110-61-2	400	2,000	0.12	0.6	
Sulfafurazole .....	127-69-5	---	---	---	---	---
Sulfamethoxazole .....	723-46-6	---	---	---	---	---
Sulfotep.....	3689-24-5	4	20	---	---	---
Sulfur hexafluoride.....	2551-62-4	120,000	600,000	20	100	
Sulfuric acid .....	7664-93-9	20	100	---	---	---
Sulfur monochloride.....	10025-67-9	120	600	0.02	0.1	
Sulfur pentafluoride.....	5714-22-7	5	25	0.5ppbv	2.5ppbv	
Sulfur tetrafluoride.....	7783-60-0	8	40	2.ppbv	10.ppbv	
Sulfuryl fluoride.....	2699-79-8	400	2,000	0.1	0.5	
Sulprofos.....	35400-43-2	20	100	---	---	---
2,4,5-T .....	93-76-5	200	1,000	---	---	---
Tantalum.....	7440-25-7	100	500	---	---	---
TEDP (Sulfotep).....	3689-24-5	4	20	---	---	---
Teflon decomposition products.....	---	---	---	---	---	---
Tellerium & compounds, as Te.....	13494-80-9	2	10	---	---	---
Tellerium hexafluoride, as Te .....	7783-80-4	4	20	0.4	2	

\*\*Petroleum solvents generally, except kerosene

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Temephos.....	3383-96-8	200		1,000	---	---
TEPP.....	107-49-3	1		5	0.08 ppbv	0.4 ppbv
Terphenyls .....	92-94-4	---		---	---	---
2,3,7,8-Tetrachlorodibenzofuran.....	51207-31-0	---		---	---	---
1,1,1,2-Tetrachloro-2,2-difluoroethane.....	76-11-9	83,400		417,000	10	50
1,1,2,2-Tetrachloro-1,2-difluoroethane.....	76-12-0	83,400		417,000	10	50
Tetrachloronaphthalene.....	1335-88-2	40		200	---	---
Tetraethyl lead (as Pb).....	78-00-2	1.5		7.5	---	---
Tetrahydrofuran.....	109-99-9	11,800		59,000	4	20
Tetramethyl lead (as Pb).....	75-74-1	1.5		7.5	---	---
Tetramethyl succinonitrile .....	3333-52-6	60		120	0.01	0.05
Tetranitromethane.....	509-14-8	160		800	0.02	0.1
Tetrasodium pyrophosphate.....	7722-88-5	100		500	---	---
Tetryl (2,4,6-trinitrophenyl-methylnitramine).....	479-45-8	30		150	---	---
Thallium, soluble compounds (as Tl).....	---	2		10	---	---
4,4'-Thiobis (6-tert butyl-m-cresol).....	96-69-5	200		1,000	---	---
Thioglycolic acid .....	68-11-1	100		500	0.02	0.1
Thiram.....	137-26-8	100		500	---	---
Tin, metal.....	7440-31-5	40		200	---	---
Tin, inorganic compounds, except SnH4.....	---	40		200	---	---
Tin, organic compounds (as Sn).....	---	2		10	---	---
Tin, oxide (as Sn).....	---	40		200	---	---
Titanium dioxide (as Ti).....	13463-67-7	300		1,500	---	---
Toluene.....	108-88-3	7,500		37,500	2	10
Toluene-2,4-diisocyanate (TDI).....	584-84-9	0.72		4	0.1 ppbv	0.5 ppbv
Tributyl phosphate.....	126-73-8	50		250	4. ppbv	20. ppbv
Trichloroacetic acid .....	76-03-9	100		500	0.02	0.1
1,2,4-Trichlorobenzene.....	120-82-1	800		4,000	0.1	0.5
1,1,1-Trichloroethane.....	71-55-6	38,000		190,000	7	35

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Trichlorofluoromethane.....	75-69-4	---	---	---	---	---
Trichloronaphthalene.....	1321-65-9	100	500	---	---	---
2,4,5-Trichlorophenol.....	95-95-4	---	---	---	---	---
1,2,3-Trichloropropane.....	96-18-4	6,000	30,000	1	5	
1,1,2-Trichloro-1,2,2-trifluoroethane.....	76-13-1	152,000	760,000	20	100	
Tricyclohexyltin hydroxide (Cyhexatin).....	13121-70-5	100	500	---	---	---
Triethylamine.....	121-44-8	800	4,000	0.2	1	
Trifluoromonobromomethane.....	75-63-8	122,000	610,000	20	100	
Trimellitic anhydride.....	552-30-7	0.8	4	0.1 ppbv	0.5 ppbv	
Trimethylamine .....	75-50-3	480	2,400	0.2	1	
Trimethyl benzene.....	25551-13-7	2,500	12,500	0.5	2.5	
Trimethyl phosphite.....	121-45-9	200	1,000	0.04	0.2	
2,4,6-Trinitrotoluene (TNT).....	118-96-7	10	50	---	---	
Triorthocresyl phosphate.....	73-30-8	2	10	---	---	
Triphenyl amine.....	603-34-9	100	500	---	---	
Triphenyl phosphate.....	115-86-6	60	300	---	---	
Tungsten & compounds, as W – soluble .....	---	20	100	---	---	
-insoluble.....	---	100	500	---	---	
Turpentine.....	8006-64-2	11,200	56,000	2	10	
Undecanethiol.....	---	---	---	---	---	
Uranium (natural) compounds (as U)						
soluble.....	---	1	5	---	---	
insoluble.....	---	4	20	---	---	
Valeraldehyde.....	110-62-3	3,500	17,500	1	5	
Vanadium, as Pentoxide, -Dust.....	1314-62-1	1	5	---	---	
- (Fume).....	1314-62-1	1	5	---	---	

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.

TABLE 29-3, Continued

<u>"HAZARDOUS AIR POLLUTANT"</u>	<u>"CAS NUMBER"</u>	(ug/m <sup>3</sup> )	<u>"HAZARD LIMITING VALUE" ("HLV")</u> <u>VOLUMETRIC UNITS</u>			
			<u>8-HOUR</u>	<u>30-MINUTE</u>	<u>8-HOUR</u>	<u>30-MINUTE</u>
Vinblastine.....	865-21-4	---	---	---	---	---
Vincristine.....	57-22-7	---	---	---	---	---
Vinyl acetate.....	108-05-4	600	3,000	0.2	1	
Vinylidene chloride.....	75-35-4	400	2,000	0.1	0.5	
Vinyl toluene.....	25013-15-4	9,600	48,000	2	10	
VM & P Naphtha.....	8030-30-6	27,000	135,000	6	30	
Warfarin.....	81-81-2	2	10	---	---	
Welding fumes (not otherwise classified).....	---	100	500	---	---	
o-Xylene.....	1330-20-7	8,680	43,400	2	10	
m-Xylene.....	1330-20-7	8,680	43,400	2	10	
p-Xylene.....	1330-20-7	8,680	43,400	2	10	
m-Xylene, -diamine.....	1477-55-0	---	---	---	---	
Yttrium.....	7440-65-5	20	100	---	---	
Zinc chloride fume .....	7646-85-7	20	100	---	---	
Zinc oxide fume .....	1314-13-2	100	500	---	---	
Zinc stearate.....	557-05-1	---	---	---	---	
Zirconium compounds (as Zr).....	---	100	500	---	---	

Note: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.